File - Balloon, Powered

CONFIDENTIAL

Revise 1 - 14 April
2 - 8 April

23 March 1959

MEMORANDUM FOR: Assistant Chief/TSS/Research and Development

SUBJECT : Feasibility of a Powered Balloon as a High Altitude Platform for Intelligence Collection

REFERENCE : 1. Report by General Mills, "Controllable Balloon Study", Sponsored by [redacted] 25X1

2. Report by [redacted] "Final Report on a Meteorological Study", Sponsored by TSS/ED 25X1

3. Memorandum for AC/TSS/R&D from C/TSS/ED dated 28 April 1958

1. Since the date of the memorandum, reference 3 above, considerable study work has been done in an effort to apply predicted powered balloon performance to possible target areas under realistic meteorological conditions. Reference 1 was accomplished for a very specific mission, Reference 2 was more general in nature. In both cases the studies suffered from lack of observed data at very high altitudes.

2. From the accumulated studies on powered balloons a feasibility study is presented designed to outline the estimated usefulness of such a vehicle as a platform for intelligence collection devices. In an attempt to make this study stand by itself, some of the estimates previously made have been repeated. Since References 1 and 2 summarize in detail the estimated performance they are referred to in this study.

3. The possibilities for intelligence collection operations using the potential of this vehicle are obviously far from exhausted. It was hoped that complete missions could be run on paper plugging in values for powered balloon performance and upper winds against specific missions. Little hope is now entertained for this idea because of the lack of data on high altitude winds that can be based on actual observations. Wind trajectories in Reference 2 were based on extrapolations of estimates. It is believed that the value of these reports is primarily based on the light they shed on general conditions that can be expected in the areas covered.

4. The feasibility may be briefly summarized by the statement that a powered balloon is the only vehicle now or in the foreseeable future that can remain aloft for extended durations at very high altitudes and under certain conditions can reach targets not accessible by any other aircraft.

CONFIDENTIAL

DOC 27 REV DATE 2/7/80 BY 858322
ORIG COMP 026 OPI 56 TYPE 02
ORIG CLASS S PAGES 6 REV CLASS C
JUST 22 NEXT REV 2010 AUTH: HR 70-2

5. Should an R&D effort be applied toward the establishment of a powered balloon, it is highly recommended that a requirement be levied on the Air Weather Service to take very high altitude weather soundings in areas of possible interest. Further recommendations are:

a. Establish an [redacted] technical representative as a consultant on radar shielding methods to follow all phases of design work. 25X1

[redacted] 25X1

[redacted] 25X1

Chief
TSS/Engineering Division

Attachment:
Feasibility Study

DD/P/TSS/EI[redacted]mt 25X1